

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Daxiang Wang, et al.	§	Group Art Unit:	1621
		§		
Serial No.:	10/822,528	§	Examiner:	Jafar F. Parsa
		§		
Filed:	April 12, 2004	§	Atty. Docket No.:	1856-17802
		§		
For:	Selective Removal Of Oxygen	§		
	From Syngas	§		

INFORMATION DISCLOSURE STATEMENT

Atty. Dkt. No.: 9407-A-01

Date: July 8, 2005

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement, including completed Form PTO-1449, comprises a list of pertinent art of which Applicants are aware.

The submission of this Information Disclosure Statement and the references submitted therewith is not an admission that the art cited is "prior" with respect to the present invention, nor is it a representation, that no better art exists. Applicants hereby reserve the right to swear behind or otherwise disprove any alleged "prior" nature of any art cited should the facts support and the situation warrant such an action. It is submitted that the art cited does not constitute a bar to the patentability of Applicants' invention under 35 U.S.C. § 102 or § 103.

Consideration of the following related applications and additional information (including any relevant co-pending or abandoned U.S. applications, prior uses and/or sales, etc.) is requested: Application Serial No. 60/353,822 filed on January 31, 2002, entitled Oxygen

Selective Membrane To Remove Oxygen From Syngas, Application Serial No. 60/353,774 filed

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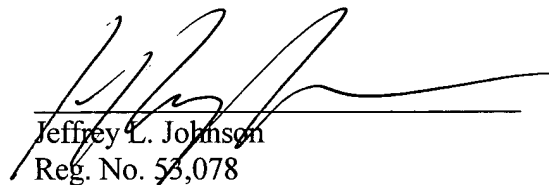
154280.01/1856.17802

on March 12, 2002, entitled Oxygen Selective Membrane To Remove Oxygen From Syngas and Application Serial No. 10/219,108 filed on August 15, 2002, entitled Selective Removal of Oxygen From Syngas.

Pursuant to 37 C.F.R. § 1.98 (d), copies of certain publications, or other information, as specified in 37 C.F.R. § 1.98 (a), listed in the attached Form PTO-1449 are not provided herewith, as they have been previously submitted to, or cited by, the Office in the above-mentioned earlier U.S. Patent Application(s). The Information Disclosure Statement filed in the earlier application(s) complies with 37 C.F.R. § 1.98 (a)-(c).

Because an Office Action has been entered in this case, this Information Disclosure Statement is being filed under C.F.R. 1.97(c). Applicant hereby authorizes the Commissioner to charge Deposit Account 03-2769 of Conley Rose, P.C. the amount of \$180 so that this Information Disclosure Statement may be considered.

Respectfully submitted,



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ATTORNEY/AGENT FOR APPLICANT

Form PTO-1449 (Modified)

**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use several sheets if necessary)

Atty. Docket No.  
1856-17802  
(9407.A-01)Serial No.  
10/822,528Applicant  
Daxiang Wang et al.Filing Date  
April 12, 2004Group  
1621**REFERENCE DESIGNATION U.S. PATENT DOCUMENTS**

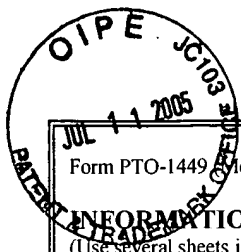
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	AA	3,996,105	12/07/1976	Harrison et al.	195	28	
	AB	4,269,940	05/26/1981	Patel et al.	435	148	
	AC	4,318,784	03/09/1982	Higgins et al.	204	73	
	AD	4,587,216	05/06/1986	Patel et al.	435	123	
	AE	4,827,043	05/02/1989	Butler	568	492	
	AF	5,128,060	07/07/1992	Ueno et al.	252	184	
	AG	5,192,672	03/09/1993	Lipscomb	435	155	
	AH	5,453,211	09/26/1995	Alward	252	45	
	AI	5,714,379	02/03/1998	Phipps, Jr.	435	266	
	AJ	5,730,003	03/24/1998	Nguyen et al.	62	648	
	AK	5,958,757	09/28/1999	Steffan et al.	435	262.5	
	AL	5,985,649	11/19/1999	Stensel et al.	435	266	
	AM	6,019,810	02/01/2000	Phillips et al.	55	512	
	AN	6,043,288	03/28/2000	DeGeorge et al.	518	715	
	AO	6,103,773	08/15/2000	Wittenbrink et al.	518	702	
	AP	6,147,126	11/14/2000	DeGeorge et al.	518	715	
	AQ	6,169,120	01/02/2001	Beer	518	715	
	AR	6,254,946	07/03/2001	Hirata et al.	428	35.2	
	AS	6,277,338	08/21/2001	Agee et al.	422	189	
	AT	6,369,148	04/09/2002	Chiang et al.	524	417	

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

	AU	Structured Catalysts and Reactors, A. Cyulski and J.A. Moulijn (eds.), Marcel Dekker Inc., 1998 (p. 599-615)
	AV	U. Balachandran et al., Dense Ceramic Membranes for Partial Oxidation of Methane to Syngas, Applied Catalysis A: General 133, 1995 (p. 19-29)
	AW	Jonghee Han et al., Oxygen Permeation Through Fluorite-Type-Bismuth-Yttrium-Copper Oxide Membranes, Journal of Membrane Science, 132 (1997) p. 235-243
	AX	H.J.M. Bouwmeester et al., Oxygen Semipermeability of Erbium-Stabilized Bismuth Oxide, Solid State Ionic, 53-56 (1992) p. 460-468
	AY	Shenglin Liu et al., Effects of Alkali and Rare Earth Metal Oxides on the Thermal Stability and the Carbon-Deposition over Nickel Based Catalyst, Study of Surface Science and Catalyst, 119 (1998) p. 747-52
	AZ	Chung-Yi Tsai et al., Dense Perovskite, $La_{1-x}A_xFe_{1-y}Co_yO_{3-x}$ ( $A=Ba, Sr, Ca$ ), Membrane Synthesis, Applications and Characterization, J. Am. Ceram. Soc. 81 [6] p. 1437-1444 (1998)
	BA	L.M. van der Haar et al., Homogeneous Porous Perovskite Supports for Thin Dense Oxygen Separation Membranes, Journal of Membrane Science, 180 (2000) p. 147-155
	BB	Schulz et al., Applied Catalyst Volume 186 Nos. 1,2 October 1999 (229 p).

**EXAMINER****DATE CONSIDERED**

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



Form PTO-1449 (Modified)

Atty. Docket No.  
1856-17802  
(9407-A-01)Serial No.  
10/822,528**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use several sheets if necessary)

Applicant  
Daxiang Wang et al.Filing Date  
April 12, 2004Group  
1621**REFERENCE DESIGNATION U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	BC	3,812,035	05/21/1974	<i>Krenowicz et al.</i>	252	59	
	BD	4,800,189	01/24/1989	<i>Eschwey et al.</i>	502	400	
	BE	5,446,232	08/29/1995	<i>Chen et al.</i>	585	845	02/14/1994
	BF	5,484,580	01/16/1996	<i>Sharma</i>	423	219	01/19/1994
	BG	5,607,572	03/04/1997	<i>Joshi</i>	205	763	03/21/1995
	BH	6,025,305	02/15/2000	<i>Aldrich et al.</i>	508	110	08/04/1998
	BI	6,287,653	09/11/2001	<i>Speer et al.</i>	428	35.4	03/05/1999
	BJ	6,351,971	03/05/2002	<i>Nguyen et al.</i>	62	648	12/29/2000
	BK	6,376,434	04/23/2002	<i>Katafuchi</i>	508	291	10/23/1997

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
							YES	NO

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

	BL	Guoxing Xiong, Hui Dong, Zongping Shao, Jianhua Tong, Shishan Sheng, Weishen Yang, <i>International Conference on Catalytic Membrane Reactors-2000</i> , 25-26

**EXAMINER****DATE CONSIDERED****EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP §609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/04.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

**FEE TRANSMITTAL**  
**For FY 2005****Complete if Known**

Application Number	10/822,528
Filing Date	April 12, 2004
First Named Inventor	WANG, Daxiang
Examiner Name	PARSA, Jafar F.
Art Unit	1621
Attorney Docket No.	1856-17802 (9407.A-01)

☐ Applicant claims small entity status. See 37 CFR 1.27

Total Amount of Payment (\$970.00)

**METHOD OF PAYMENT (check all that apply)**☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☒ Deposit Account Deposit Account Number: **03-2769** Deposit Account Name: **Conley Rose, P.C.**

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) ☒ Credit any overpayments under 37 CFR 1.16 and 1.17**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	Fee (\$)	Fee Paid (\$)
_____ - 20 or HP = _____ x _____ = _____						
HP = highest number of total claims paid for, if greater than 20						
Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)			
_____ - 3 or HP = _____ x _____ = _____						
HP = highest number of independent claims paid for, if greater than 3						

**3. APPLICATION SIZE FEE**

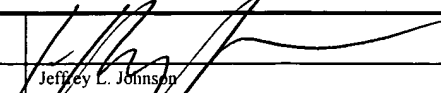
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____				

**4. OTHER FEE(S)**

	Fees Paid (\$)
Non-English Specification, \$130 fee (no small entity discount)	_____
Other (e.g., late filing surcharge): <u>INFORMATION DISCLOSURE STATEMENT</u>	\$180.00
<u>RCE</u>	\$790.00

**SUBMITTED BY**

Signature		Registration No. 53,078	Telephone (713) 238-8000
Name (Print/Type)	Jeffrey L. Johnson		Date July 8, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2..